ABHINAV PANDEY

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EDUCATION

Indian Institute of Technology (IIT) Varanasi

B.Tech, Metallurgical Engineering

Varanasi, India Nov 2022 - Present

TECHNICAL SKILLS

Programming Technologies: Machine Learning: $\label{eq:condition} Java,\,Golang,\,Rust,\,TypeScript,\,C/C++,\,Python,\,R,\,NextJS,\,NodeJS$

PyTorch, Pandas, Seaborn, Scikit-Learn

WORK EXPERIENCE

Trumio INC

San Jose, California (remote)

May 2024 - July 2025

Software Engineer Intern (Full-Time)

- Managed and maintained the Trumio admin portfolio, performing end-to-end development as a full-stack engineer using Python and FastAPI.
- Developed back-end functionalities for an AI-powered interview bot, specifically implementing **Retrieval-Augmented Generation (RAG)** systems utilizing **vector databases** to improve interview accuracy and responsiveness. Enhanced the back-end architecture of the AI interview platform.
- Technologies Used: Python, FastAPI, ChromaDB, Typescript

Trumio INC

San Jose, California (remote)

October 2024 - February 2025

Software Engineer Intern (Part-Time)

- Designed and implemented an end-to-end **Hackathon** feature for the Trumio platform where I worked on the back-end aspect of the Hackathons.
- Built an RAG (Retrieval-Augmented Generation) LLM chatbot that leverages **ChromaDB**, **MongoDB**, and **Microsoft Teams**. The chatbot uses scheduled fetching of messages via the **Microsoft Graph API** to enhance intern productivity by focusing on current tasks.
- Technologies Used: Django, ChromaDB, Docker, MongoDB, Microsoft Graph API

Google Summer of Code '24 - PEcAn Project

(Remote)

Student Software Developer

May 2024 - August 2024

- Optimized PEcAn for the free-standing use of single packages, enhancing maintainability by streamlining package interfaces and data structures which reduced package load time by almost 5 seconds.
- Fixed production bugs, simplified module development, and reduced complexity by 10%.
- Conducted comprehensive code reviews and wrote extensive unit tests and integration tests, ensuring free-standing usage of refactored packages.
- Technologies Used: JavaScript, R, Bash, PostgreSQL, Python

PROJECTS

Hedge Trading Bot

[Project Link]

- Created an automated trading bot implementing a hedging strategy to simultaneously open opposite positions. Developed decision algorithms to instantly react to market movements.
- Integrated with live exchange APIs for order execution and market data endpoints. Built robust error handling for network/API failures and rate limits.
- Technologies Used: Python, REST/WebSocket Trading APIs Binance, Pandas, Docker

$\mathbf{DbBridge}$

[Project Link]

- Developed a web application that allows secure management, browsing, and export of MongoDB data directly into Google Sheets.
- Implemented AES-256 encryption for secure URI storage, JWT/OAuth2 (Google, GitHub) authentication, and ownership middleware for resource protection.
- Built backend REST APIs using Go (Fiber) with cursor-based pagination and efficient document flattening for data exports.
- Created an intuitive front-end with Next.js for seamless interaction and data visualization.
- Automated deployment using Docker containers and GitHub CI/CD workflows.
- Technologies Used: Go (Fiber), Next.js, MongoDB, Docker, GitHub CI/CD, Redis

ClipCrafter [Project Link]

• Designed an innovative OpenAI-powered tool that intelligently extracts compelling shorts from YouTube videos, providing a time-saving open source alternative to creators.

- Attracted a monthly traffic of 1000+ users, demonstrating its popularity and utility.
- Technologies Used: JavaScript, CSS, REST APIs, OpenAI

Dotgenv [Project Link]

- A global environment management package that configures .env files from the root of your system.
- Achieved over 200+ downloads, showcasing its reliability and widespread adoption.
- Technologies Used: TypeScript, Yargs-CLI, JavaScript, NPM

CodeChat [Project Link]

- Developed a scalable CLI tool for real-time messaging using WebSockets and TCP protocols.
- Implemented support for multiple concurrent users, ensuring seamless communication across the Web.
- Technologies Used: Go, WebSockets, Concurrency

ACHIEVEMENTS

Open Source Contribution

October 2023

Accepted in Google Summer of Code '24 (GSoC) as a Student Developer.

Opened 12+ PRs in different organizations, achieving a spot in the top 1000 of the Hacktoberfest '23 Hall of Fame.

JEE Advanced 2022

August 2022

Qualified in JEE Advanced 2022, ranking in the top **0.1%** out of a million applicants in India.

LeetCode August 2022

Achieved a rating of 1400+ on LeetCode, demonstrating proficiency in coding and problem-solving skills.